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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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CLEVELAND, O.

Mr. George B. Hunter, of Newcastle-on-Tyne, England, a member of the firm of Swan & Hunter, who own one of the finest shipyards on the Tyne, visited the city this week. He is making a tour of inspection of lake shipyards. Mr. Joseph R. Oldham kindly escorted Mr. Hunter around the shipyards at this port.

B. D. Babcock, who has resigned as superintendent of the Cleveland & Pittsburg docks, will open an office as agent for the Moon Run Coal Company. The product of this mine comes to market over a new road recently built by Cleveland capital. Assistant superintendent Gibson will now have charge of the Cleveland & Pittsburg docks, with Mr. M. Andrews acting as agent.

Ore receipts at the port of Cleveland for the month of May were 186,629 tons, lumber, 36,862,000 feet; coal shipments, 122,700 tons.

On Saturday afternoon as the steamer J. H. Wade was off this port, bound in, a youth named Robert Hanna, second cook, shot himself. Dime novel reading led him to believe that there was better hunting "in the happy hunting grounds." The Wade's ensign was half mast all day Sunday.

W. J. White, owner of the handsome yacht Say When, gave a number of his local friends a spin to Rocky River and return on Saturday. Every courtesy was extended, and the guests heartily enjoyed the trip.

The Briton had her cargo discharged Monday, and the repairs, although heavy, will be completed in about a week. The Progress is in bad shape, lying at the bottom of Detroit river, near Mamajuda. Lights are kept on the after end of the wreck, and vessels pass to the eastward.

Our thanks are due to the Chicago Ship Building Co., for an invitation to attend the launch of the Minnesota Steamship Co.'s steel steamer Maritana from their shipyard on the Calumet River, foot of 101st. St., Chicago.

Mr. Leon F. Almy, of the Almy Water Tube Boiler Co., Providence, R. I., visited this port Tuesday, after making a tour of the lakes. Mr. Almy informs us that they have placed their forty-eighth water tube boiler this year, and are now enlarging their plant to meet a steadily increasing patronage in their special manufacture.

Dr. H. J. Penrod, the marine agent in charge of the lake territory and stationed at this port, is now engaged on a tour of the lakes under special orders from the chief of the Weather Bureau. He will distribute a large number of current bottles, interest the Weather Bureau officials at the several ports in the meteorlogical work now being carried on and obtain a larger number of voluntary observers among vessel masters and pilots.

At the yards of the Clevetand Ship Building Co. the keel for another freight monitor has been laid. She will be 324 feet keel, 42 feet beam and 24 feet depth of hold triple expansion engines, cylinders 20, 33, 54 by 40 inch stroke, and two Scotch type boilers 12½ feet in diameter and length. In the machine shop department the large blowing engines having 40 inch steam cylinder, and 84 inch blowing cylinders, with 54 inches stroke, are being turned out to the order of the Illinois Steel Co., Chicago. The boiler shop, foundry and the other departments are running at their full capacity and a large quantity of work is being turned out regularly.

Wrecking master Diffenbach, of Port Huron, had an easy task releasing the schooner J. D. Sawyer, as the rise in the level of J. D. Sawyer, as the rise in the level of Lake Erie almost floated her off from near Avon Point, she is now on her way to Port Huron for repairs.

Among the vesselmen visiting the port this week were Capt. Denny Sullivan, representing David Vance, of Milwaukee; Capt. J. J. Rardon, of Crosby & McDonald's Chicago; Capt. George McLeod, of Smith, Davis & Co., Buffalo; Capt. John Baxter, of the light-house tender Haze, and Mr. W. H. Doyle, of Detroit.

The machinery for the twin screw fueling scow building at the yards of the Clevelard Dry Dock Co., is now being put in her, and she will be lauuched in a few days. The work of excavating the enlarged dry dock is proceeding steadily though the continuous wet weather is holding back the work somewhat.

Capt. Dick Millen, of the steambarge Nashua, was in port Wednesday, and his friends will be pleased to learn that he looks and feels well and hearty, and is the same genial Richard as of yore.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

The schooner Marion W. Page, Captain J. R. Williams, arrived here last Thursday afternoon from Manitowoc with the cargo of coal she took on board at Buffalo late last fall. She was driven ashore in December last in a heavy gale on Lake Michigan and was released and towed to Manitowoc for repairs, her cargo was discharged and she was put into dry dock at Burger & Burger's shipyard, where she received a new stem, new stern post, some new keel, bottom plank and calking, after which her cargo was reloaded.

The 75-foot steam yacht Catharine, built by the Davis Boat and Oar Co., Detroit, for Mr. M. Cudahy, of Chicago, Ill., has arrived in Chicago, and is pronounced to be the finest steam yacht of her size on fresh water. She is fitted with a triple expansion engine and water tube boiler, of builders' own patents, and her elegant appointments are greatly admired by marine men. It is conceded that the Davis Boat and Oar Co. have turned out a splendid craft.

At Miller Brothers shipyard the steamer Thomas Smith is in dock for repairs to her wheel, the schooner George Steel for some repairs and calking, and the steamer Berrien for repairs to damage done when ashore off Fort Sheridan last week.

The steamer Arundel will arrive here this week from Detroit to run on the Graham and Morton Line until their steamer Chicora is completed.

Captain William Patterson is making all the haste possible having repairs done on the steamer W. P. Thew and converting her into a lumber carrier.

Captain John Keelin's widow last week received $1,000 from Excelsior Marine Benevolent Association, of which he was a member of Lodge 3, Chicago. The funds of the association were so well supplied that it was not necessary to make an assessment on the members to pay the above sum.

Charley Mann, of the firm of Mann Brothers, was dhere from Milwaukee Monday obtaining material for a wrecking outfit for the purpose of releasing their large scow, which went ashore on Fox Island last fall.

J. B. Johnston, of the firm of Johnston Bros., boiler makers, Ferrysburg, Mich., was in this city Monday. This enterprising firm have built a branch boiler works at 71 and 73 Mather street, Chicago, in which they will commence work about July 1st.

The steamer Berrien, lumber laden for this port, went ashore Friday morning, about 2:30 a. m., in a thick fog off Fort Sheridan, about 26 miles north of Chicago, and was not released until 11 a. m. Saturday, after jettisoning her deck load. The tug Mollie Spencer was sent to her assistance Friday morning, but failing to find her brought along a tow of schooners to Chicago and went to the Berrien again after she got in with her tow, and succeeded in releasing her. The captain of the Berrien is of the opinion that she could have been released without jettisoning her deck load had the Spencer arrived on the scene on Friday within a few hours after she was sent for.

The Rev. Father Gallagher, of Beaver Island, the well known sailor's friend, arrived here Saturday on the steamer City of Charlevoix, and spent a few days in this city visiting his friends.

Both of the draws of Madison street bridge was blocked for two hours Saturday, occasioning considerable delay and inconvenience to city and floating traffic. The steamer Florida was unloading at the dock just above the bridge and blocked the east draw, and the steamer Ida E. when going up the river got jammed in the west draw by four scows in tow of a tug coming down. The tug had more scows in tow than she could manage, hence the trouble.

Captain Moses Gerard was here from Muskegon Saturday on business, the tug D. P. Hall, of Ludington, which he commanded, having been sold to the Independent Tug Line, Chicago, he is now commanding the tug Cora Fuller, owned by Crosby & Co., Muskegon, and will run her until their new tug building at Grand Haven by the Grand Haven Ship Building Co. goes into commission. The new tug's dimensions are as follows. 93 feet over all, 18 feet beam, 9½ feet hold, engine 16 and 30 by 24 and boiler 8 by 13, to be allowed 150 pounds pressure; both built by the Montague Iron Works, Mich.

Capt. Albert J. Missener was appointed master of the barge Churchill, vice Capt. S. Jones, resigned.

Edward Smith, of the firm of Brown & Smith, vessel agents, Buffalo, was in this city Monday.

The Canadian steamer Clinton arrived here Friday with 7,000 bushels wet wheat and a steam pump on board. The wheat was purchased by Mr. Armour, of Chicago, and was unloaded at one of the Armour elevators.

Grain freights are quiet on the basis of 1½ cents on wheat, 1¼ cents on corn to Buffalo.

Capt. E. B. Bowen has been appointed to the command of the fine tug James McGordon, recently purchased by the Dunham Towing and Wrecking Co.

I learn that active figuring is being done by the Chicago Shipbuilding Co., of South Chicago, on new steel tonnage for Southern parties.

WILLIAMS.

YACHTING ON THE LAKES.

The capitalists of the Great Lakes are awakening to the fact that the finest yachting facilities in the world are offered on these large areas of land locked waters.

Each of the more important ports are beginning to take such an interest in yachting as their location demands and Chicago is one of the last to drop into line, though now that the sailing pastime has been broached there, it is safe to state that the finest and largest yacht club on the lakes will soon hail from the "windy city."

It has become the rage among Chicago gentlemen to own a private steam yacht, and Chicago's fleet of these fine pleasure craft is being added to almost daily. Michael Cudahy's steam yacht, built expressly for him by the Davis Boat Works at Detroit, is 70 feet in length, 18 feet beam, 7 feet hold, and measures 31 tons. Her model is about as near perfection as can be imagined. She has triple expansion engines, with excellent power, but is intended as a family yacht and not a racer, and her average speed is about 11 miles per hour. She carries two spars. She has flush decks, so as to give lots of deck room, and is fitted with lower cabins. The name given the fine new craft is the Catherine. She was taken to Chicago from Detroit by Capt. E. B. Blair, and it is understood that he will remain in command. Daniel L. De'afontaine has purchased the steamer Hattie B. from Charles Wilson, and will make a private family yacht of her. She is a finely built craft, and has good power, with excellent passenger accommodations. Capt. Peter Cronley, the well known lake navigator, and for several seasons in charge of the Huntington yacht Nautilus, is in charge of the new crack steam yacht, built in New York for Oswego parties. This craft is pronounced phenomenal, her speed being placed at thirty miles an hour, though possibly this figure will stand modifying. Colonel John Mason Loomis, of Chicago, is to bring his fine sail yacht Viking home to the lakes. She is a member of the New York Yacht Club, and will be accompanied to Chicago by several other craft belonging to that club, both steam and sail. Thomas Bradwell's sail yacht is rapidly approaching completion at a Chicago yard and will be launched at an early date.

The second steam pleasure yacht of good size for Duluth arrived in that harbor last week, and is already away down the north shore with a cargo of fishermen. She is the Nautilus, lately owned in Cleveland, and brought by B. F. Howard and Con O'Flynn, of this city. The latter will command her. The boat is a 'high roller' and the first party out from Duluth in her claim the boat will roll to-day if there is to be a storm next week. She is a neat boat, however, a little larger than the yacht Picket, bought last year. There will probably be a few more yachts in Duluth soon, in fact it is understood that negotiations are or have been under way for the purchase of the fine boat Nydia, the property of Dr. R. V. Pierce, the Buffalo pill and patent medicine man. Capt. Alex. McDougall will probably have a steam yacht next year, but his boat may be built at the whaleback yards at the head of the lake.

MESSENGER PIGEONS AT SEA.

The U. S. Navy Department are now experimenting with homing pigeons as a means of communication with naval vessels.

Fourteen birds were placed on board the U. S. S. Constellation at Annapolis on Monday and will bring messages to the press concerning affairs on board from different points along the bay to Norfolk. They will on their return home be again shipped to Norfolk to meet the Constellation, and will be taken 100 miles to sea and be liberated at different points off the coast of Maryland and Delaware, bringing messages to the Secretary of the Navy and to the press. This experiment is the first attempted by United States war vessels, and its success means probably the establishment of government lofts along the Atlantic coast to furnish news from war vessels cruising along the coast. These birds have, in times past, flown from vessels 450 miles at sea at great speed, and have been used by governments abroad as a naval messenger service with grand success. The messages on the birds liberated from the Constellation will be inclosed in quills and attached to the middle tail feather of each bird. The message is abont six inches square. Each pigeon will have stamped on its wing the following: "U. S. Messenger Pigeon; Robert B. Caverly, 1424 New York avenue, Washington, D. C."

CHICAGO AS A SHIPPING PORT.

In the district of Chicago, which embraces South Chicago and the minor port of Michigan City, the total arrivals for the month of May numbered 1,360 of 719,031 tons, and 1,345 clearances with a tonnage of 727,816 tons.

The grand totals, including foreign vessels, are as follows: Arrivals, steam and sail, 1,370; tonnage, 723,443; clearances, including steam and sail, 1,368; tonnage, 740,965.

The total cash collections by the custom house for the month of May were $435,873.07; for May, 1891, $394,723.39. From January 1 to May 31, 1892, the collections were $523,000 greater than for the same time last year. For all of last year the collections were $900,000 greater than any previous year in the history of the port, and the present year will show an increase of about $1,000,000 over those unprecedented figures, it being evident that the receipts for this year will be fully $7,000,000.

THE U. S. S. MICHIGAN ON A LAKE SURVEY EXPEDITION.

The man-of-war Michigan, Captain Wingate, has arrived at Chicago from Erie, Pa., to co-operate with Captain Marshall, the United States engineer in charge of government works at Chicago, in making a thorough survey of the coast of Lake Michigan from the piers at Chicago to Calumet river. There are numerous dangerous reefs along the shore, and a chart is to be made which will doubtless prevent many serious disasters. Even Chicago vessels and Chicago tugmen get their craft on these dangerous reefs, and strangers in those waters would stand little chance.

Capt. Marshall has had various Chicago pilots in conference with him,, among them Capt. Brewer, and has closely examined them in regard to the location of these reefs. This survey and chart will be of incalculable benefit to the whole lake marine, for South Chicago is rapidly looming up as a great and busy port.

The officers of the Michigan are: Lieutenant Symonds, Lieutenants Chase, Helm and Stafford, Surgeon Baldwin, Paymaster Chapman and Chief Engineer Gage. The crew of the ship will be recruited at Chicago for the season and for this special survey. After the survey is completed, the Michigan will visit Cleveland where she is to be supplied with new boilers.

A SERIOUS COLLISION CASE.

Early on Thursday morning, June 2nd, the steel steamer Briton of the Menominee Transit Co. and the steamer Progress of the Milwaukee Transit Co., came into collision near Wyandotte, Detroit river, resulting in the sinking of the Progress and serious damage to the bow of the Briton.

The Progress was valued for insurance purposes at $87,000 and had on board 2,000 tons of coal valued at $5,000. The Briton had an insurance valuation of $200,000 and carried a cargo of iron ore.

The reason now given for the steamers coming together was through a misunderstanding of the whistle signals given in passing, whereby one or the other of the vessels sheered contrary to the direction indicated by her whistle signal. The redeeming feature of the collision is, that no life was lost, and after the experience gained in the unloading and raising the Kasota, it would seem that well directed and prompt efforts will be made to raise the Progress, as she is sunk in comparatively shoal water, about 3½ fathoms.

NEW LIFE SAVING STATIONS.

Capt. Dobbins, superintendent of the 9th. life-saving district has just returned from Washington, where he has been in the interest of the life-saving service, and he states: "It is with great satisfaction that I can announce officially that the Niagara life-saving station at the mouth of the Niagara River will be built at once; also one at Ashtabula, O. The probabilities are that the length of time it would take to advertise for bids and to build will advance the time of opening these stations until fall or maybe until next spring; but we will surely have them now as I have it officially." The station at Ashtabula is urgently needed and if possible should be put in commission before the fall storms set in, as the immense commerce at the harbor is certain to give a life-saving crew plenty of work in having lives and property.

NOTICE TO MARINERS.

Head of Bois Blanc Range Lights.

The wooden structures, from which the range lights at the head of Bois Blanc Island were exposed, have been replaced by iron skeleton towers triangular in plan, with oval slatted targets or beacons at their tops. Both towers are on the sites of the old buildings. The front range building stands 300 feet from the extreme north point of the Island, and is 70 feet high. The tower and target are painted white. The light will be fixed white as heretofore, and be elevated 70 feet above the level of the river. Lat. N. 42° 6′ 17″ Long. W. 83° 7′ 10″. The back range light tower stands 450 feet S. by W. ½ W. from the front one. It is 90 feet high, and is painted red with a red target. The light will be as heretofore, fixed red, elevated 90 feet above the level of the river. Both these lights will be visible about two miles in and over a small arc on each side of the line of range. William Smith, Deputy Minister of Marine and Fisheries. Ottawa, Canada, 10th May, 1892.

THE LAKE FISHERIES.

The Census Bureau has issued a bulletin on the subject of the fisheries of the Great Lakes. It shows that in the decade which terminated with the census of 1890 over one billion pounds of food fish were taken which yielded the fishermen over $25,000,000. The bulletin also shows that 6,896 persons were engaged in 1889 in the capture of fish on the Great Lakes. These employed 107 steamers valued at $357,650, and 3,876 other vessels and boats worth $325,438. The above shows nearly 7,000 more men to be added to the 16,000 which the Census Bureau gives as the floating population of the Great Lakes, and after further inquiry it may be discovered that several thousand more need to be added to arrive at the total number employed on the lakes.

FLOTSAM, JETSON AND LAGAN.

The passenger steamer Bon Voyage has departed from Lake Michigan for Caarlotte, N. Y., to take her place on the St. Lawrence river for the excursion season.

Capt. William Dulac, at Mt. Clemens, is rebuilding the schooner S. B. Pomeroy, which he bought last fall, and will have her out in about two week. She gets a whole new stern and will be turned out in prime shape.

Chicago, Buffalo, Toledo and Milwaukee have all had more or less trouble with shipping seamen during the past week. Union and non-Union seem to be continually at loggerheads with each other, but vessels are not being detained at any of these ports on account of the disputes.

The owners of the floating pneumatic elevator Cyclone stationed at Buffalo for several years past will quite likely begin legal action against the harbor-master for the removal of their floating elevator from their own dock, as it breaks up their business just when they were in shape to successfully compete with the elevator monopoly after several years experimenting.

The tug Sweepstakes was fined $50 and $35 costs for refusing to take the berth in Sand Beach harbor as ordered by the custodian. Masters of vessels should not forget the authority of the harbor master at Sand Beach and also that the anchorage is under Federal control, whose rules for harbor of refuge can not be ignored.

The survey of the steamer John B. Lyon's damage footed up $12,082—$11,500 being particular average and $582 general average charges. With the expenses of wrecking and temporary repairs at Port Huron, the entire loss from her stranding will be nearly $20,000, not including her loss of time. It will take about two weeks to complete her repairs.

The section of the United States law under which the three seamen who boarded the baage Mabel Wilson at the government breakwater at Buffalo are to be prosecuted, reads as follows: "Every person who upon the high seas or in any arm of the sea; or in any river, haven, creek, basin, or bay, within the admiralty jurisdiction of the United States, and out of the jurisdiction of any particular State, on board any vessel belonging in whole or part to the United States or any citizen thereof, with a dangerous weapon or with intent to perpetrate any felony, commits an assault on another shall be punished by a fine of not more than $3,000 and by imprisonment at hard labor not more than three years."

THE CANAL TOLLS.

Special Correspondence to The Marine Record.

TORONTO, Can.—Hon. Mackenzie Bowell, Canadian minister of militia, and Hon. George E. Foster, Canadian minister of finance, were sent to Washington by the dominion government last week for purpose of conferring with the U. S. government as to which is the best course to pursue in reference to the controverted canal tolls. This is considered by some Canadian marine men as being an unnecessary trip, calculated to spend the money of the Canadian people and accomplish nothing, for no change can be made in the treaty of 1871 without the sanction of the British power. The present imposition of Welland canal tolls is not regarded as an infringement of treaty rights in Canada.

A Washington special dispatch to the Toronto *Globe* said that the Canadian commission fared badly. They had expected, seemingly in good faith, to accomplish something by their visit to Washington this time, but this dispatch stated that they departed the American capital for Ottawa last Saturday disappointed over the result of their journey. The returned ministers will no doubt give the Canadian House of Commons, now in session, a report of their operations this week. Secretary Blaine's resignation, it is presumed, had something to do with the hasty leavetaking of the Canadian commissioners.

J. A. C.

THE LOWEST TEMPERATURE EVER RECORDED.

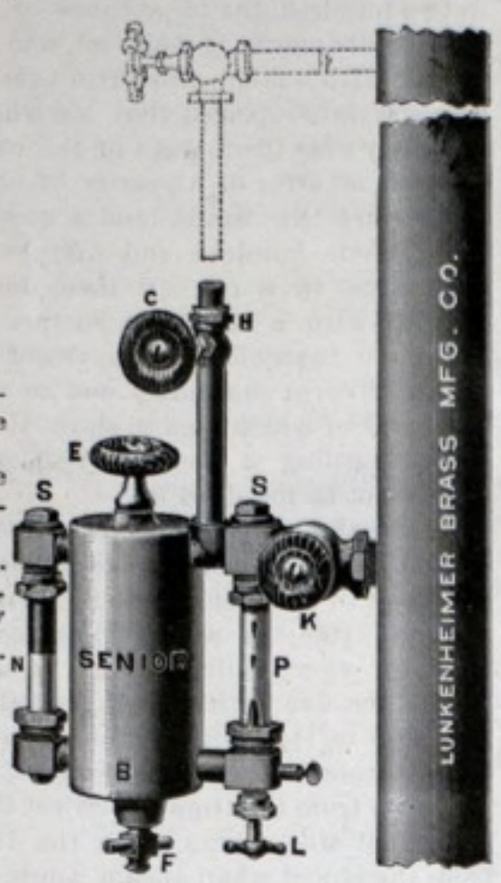
In Dr. Nansen's remarkable expedition across Greenland very low degrees of temperature were recorded. At one place the thermometer sank to minus 50 degrees Fahrenheit. This was during the month of September, and is believed to have been the lowest temperature ever met with on earth at that season. The lowest temperature, however, that was ever recorded anywhere was observed by a meteorologist on December 30th, 1871, at Werchojansk, in Northern Siberia, when the specially constructed thermometer used marked 113 degrees of frost, or, put more scientifically, a temperature of minus 81 degrees Fahrenheit.

TUNNEL OR BRIDGE.

At the stockholders' meeting of the Michigan, Midland & Canada Southern, and Toledo, Canada Southern and Detroit, and the Canada Southern Bridge Co., held in Detroit on Friday, June 3d, the old board of directors were elected, and they will meet in Chicago next month to discuss the feasibility of a bridge or tunnel at Detroit, and if they recommend that either be built another meeting of the stockholders will be called later to devise ways and means. James Tillinghast, of Buffalo, and Charles F. Cox, of Chicago, were in attendance at the meeting.

A SIMPLE AND PRACTICAL SIGHT FEED LUBRICATOR.

Lunkenheimer's Improved "Senior" Sight Feed Lubricator is acknowledged by all users to be the most satisfactory and perfect working cup on the market, and is guaranteed to give entire satisfaction.



DESCRIPTION.

B—Oil reservoir.
C—Upper valve.
E—Filling plug.
F—Drain valve.
H—Union to connect condenser pipe and valve.
K—Discharge valve
L—Valve for regulating flow of oil.
N—Indicator glass.
P—Sight feed glass.
Valve to drain or blow out sight-feed glass P.

It will pay those not yet familiar with this lubricator, to investigate same and become acquainted with its many and superior advantages not to be found in any other cup. These consist in

First—Simple and practical construction.

Second—No condensing bulb or chamber to freeze and burst.

Third—Plugs (S) to facilitate replacing and cleaning of glasses.

Fourth—Vent to blow out sight-feed glass (P).

Fifth—Shanks on ⅜ and ½ pint sizes threaded for ⅜" pipe instead of ½", consequently easily attached to small steam pipes.

Sixth—Every cup tested and warranted.

These advantages, combined with neat design, superior workmanship and finish, make the "Senior" the most modern and efficient sight feed lubricator in the market.

Complete directions are sent with every cup.

The "Senior" is made in 8 sizes from ¼ pint to one gallon inclusive, either in brass or nickel plated, and can be supplied by any dealer in brass goods.

This lubricator is manufactured only by The Lunkenheimer Brass Manufacturing Co., of Cincinnati, Ohio, U. S. A.

LIVE UP TO THE RULES OF THE ROAD.

CLEVELAND, June 7th.

To the Editor of The Marine Record.

As marine disasters are growing quite frequent of late in our lake navigation it will probably prove wholesome for the interests at large to have some neglects pointed out regarding how the "rules of the road" are lived up to by at least a few of our pilots. Undersigned has convinced himself as to the true state of things by making trips in different cratt of some of the higher classed tonnage, and found that there is three of of these rules specially neglected, and one of these being the very first and most important of all, that is two steamers meeting head on.

The rule given for this case is that when two steamers are meeting head on they shall each give one short blast of their steam whistle and direct their course to starboard, there by passing on port side of one another.

This is the law in plain English and as posted up in every pilot house, and the only rule that will be accepted by the courts of admiralty. But it is not lived up to. Starboard signals are just as frequent as port signals when meeting head on, according to the feeling of the pilot that sounds his whistle first, the meeting pilot very good naturedly answering by the same signals in most instances, even if they are unlawful.

This is the prevailing custom, although the proper way should be that when two steamers are meeting head on and one of them first signals two blasts, the other boat should in every instance answer one blast and if within the half a mile limit check down until the proper signal is received. And be it remembered that in case of a collision the boat that persisted on the port signal of one blast has complied with the law and the other one will stand the consequences, which lately has been proved by the decision of several marine cases of this nature, the courts not accepting any excuse for diverging from this rule.

When such confusion is allowed to exist, regarding the very first of the rules, it can easily be imagined that the rest of them are lived up to accordingly. There are specially two more instances where signals are required by the law that I have noticed neglected. One is the rule that requires a steamer when nearing a short bend in a river or channel to give one long blast of her steam whistle, and that a steamer within hearing distance on the other side of such bend shall answer by the same signal.

The second instance is that a steamer when overtaking another boat ahead of her shall before attempting to pass give a port or starboard signal, according to which side she intends to take, and the boat ahead to answer by the same signal, but not to change her course so as to interfere with the first boat passing her in safety.

Now these two requirements of the law are not generally lived up to.

The existing confusion and disobeying of the common "rules of the road" has no doubt something to do with the many late disasters and steps should be taken toward having this most important part of the marine laws enforced and no more life and property allowed to be endangered.

ADOLPH L. FRIETSCH.

THE NICARAGUA CANAL.

The delegates who attended the Convention at St. Louis on Friday last in the interests of the Nicaragua Canal were unanimous in their support of this important commercial waterway, and resolutions will be presented to Congress asking for national assistance towards the completion of the work. Nearly every state in the Union was represented at the Convention, though California took the initiative in calling the delegates together and to M. M. Estee, of that State is due the credit of furnishing the following statistical information regarding the benefits to be derived from the canal:

"Think of what this canal would accomplish. It would shorten the distance by sea from the Pacific to the Gulf and Atlantic coast 10,000 miles. It would increase the trade of the Pacific with the Atlantic coast. It would build up our markets with all Asiatic countries. Its construction would bring into our country the commerce of the Pacific Islands, now largely controlled by Great Britain. It would make New York and New Orleans 2,000 miles nearer Yokohama than is Liverpool by the Suez canal. The importance of the trade so secured may be noted when it is known that the foreign commerce of the countries fronting on the Pacific ocean is more than $100,000,000 annually and the actual annual tonnage from those vast regions which would pass through the Nicaragua canal would exceed 8,500,000. More than 40,000,000 people would be the direct patrons of this water-way. Japan would be one of our best cotton markets. It would furnish to the great states bordering on the Atlantic seaboard an incentive far better investments for capital and more renumerative rewards for labor. It would vitalize the flagging industries of the great west. In time it would make New York the center of the monetary exchanges of the western world, which are now controlled by London, and it would Americanize all America by making it commercially independent."

MULTIPLE SCREW PROPULSION.

The twin screw has certainly come to stay. The largest and swiftest steamers across the Atlantic are fitted with twin screws, and an average of over 20 knots an hour are obtained under present conditions.

It is not alone in the merchant service that the multiple screw propelling power is being adopted, the navies of the world are also being brought to a belief in the efficacy of even the triple propeller mechanism, and the action of the U. S. Navy Department in the use of triple screws for warships, largely based on the confidence shown in the principle by Engineer-in-Chief Melville, has attracted the attention of foreign navies. He recommended the triple screws in Cruisers No. 12 and No. 13, whose maximum speed, it is hoped, will be twenty-three knots an hour, as propelled by engines of 23,000 horse power. The French Government long ago had under construction the Dupuy de Lome, and more recently began the erection of an armored battleship of some twelve thousand tons displacement, to be called the Massena, which is also to be propelled by triple screws. Another ship of the Massena class is to be begun the latter part of the present year by the same government. The German naval authorities have under construction a triple screw war vessel called the Kaiserin Augusta, having a displacement of six thousand tons and an indicated horse power of twelve thousand. The anticipated speed is twenty knots an hour. In point of speed, the U. S. vessels Nos. 12 and 13 will exceed the triple-screw ships of any other nation.

TO FIND THE MAGNETIC POLE.

At a meeting of the American Geographical Society, held in New York on May 2nd, the proposed expedition to find the north magnetic pole, which is about 1,200 miles further south than the geographical pole, was discussed. Gen. A. W. Greeley and Col. W. H. Gilder told how safely and comfortably the proposed expedition could be made. It is calculated that the magnetic pole is somewhere in the neighborhood of King William Land, possibly on water instead of land. English and other European explorers have been in that neighborhood. One of them got within a few miles of the exact point several years ago, and the magnetic needle pointed almost vertically. Its angle with the horizontal was 89° 59′. It is believed that the magnetic pole, which moves around a little, has a regular period that can be determined. It will be of advantage to navigators and surveyors to be able to allow for the variation at any time. Col. Gilder, who accompanied Lieut. Schwatka on his expedition, has offered to take charge of the proposed trip to find the magnetic pole, and make a general survey of the surroundings. It is believed that there will be no difficulty in raising the necessary $25,000. It was suggested that the U. S. coast and geodetic survey will put the necessary instruments at the disposal of the expedition.

Notes.

THE American Ship Windlass Co., Providence, R. I., will furnish the large tug, building by F. W. Wheeler & Co. for Nicaranga, with two double barrel steam capstans, one to go aft and one forward.

DENSE fogs have prevailed over lakes Erie, Huron and Michigan during the week. On Sunday the fog was accompanied by rain, with the wind northwest at the straits, and light clear weather on Lake Superior.

BOUTELLE & SMITH, the extensive lumber firm are now putting a raft together in the Cheboygan harbor which will contain about 9,500,000 feet of lumber. It is the largest one ever constructed on the lakes, and probably the largest raft of lumber ever floated. Two or three large tugs belonging to the firm will tow it away when completed.

THE ore handlers strike at Ashland, Wis., has been declared off, and the men are now at work for $1.75 per day and 25 cents an hour overtime. Many vessels had to change ports on account of the strike, and it was threatened to give the work over to Italian laborers rather than ruin the trade of the port. This the ore men could not stand, and they at once resumed work.

DAVIDSON'S addition to the fleet at West Bay City this year will consist of his three big steamers, two schooners, and a tug. It is expected that the steamers will be launched and completed at an early date and so that they will leave Saginaw river about the same time. Two are now ready for launching, but are being held for machinery, and the third is being rapidly planked and decked.

THE owners of the Pilgrim, which sunk the steamer Kalamazoo in Lake Michigan, turned her over to the owners of the Kalamazoo, who pay $6,000 to avoid the chances of litigation. The Pilgrim is worth $23,000, while the Kalamazoo was worth $26,000. This transfer seems to prove that the collision was caused by mistaken orders on the Pilgrim when the two steamers sighted each other through the fog.

THE Pennsylvania company has bought land along the river front at Toledo, O., the intention being to build coal and iron-ore docks, the cost of which it is estimated will reach at least $500,000. The company will make Toledo their central shipping point on the lakes, thus being able to compete directly with the Hocking Valley and Ohio Central, whose superior shipping facilities have heretofore given them a great advantage over the Pennsylvania.

THE new capital that recently purchased the extensive plant of the Chicago Shipbuilding Co. are considering the advisability of building a drydock of the largest class on their property at Colehour. The proposed dock would not be less than 400 feet long, 100 feet in width at the top, and 60 feet in the bottom, with 16 feet of water over the the keel-blocks and a 70-foot gate. The location would be in the Calumet River, about a mile from Lake Michigan.

THE North Atlantic Pilot Chart for June is accompanied with a supplement giving all of the late reports of the use of oil to prevent heavy seas from breaking on board vessels, the path of several important storms are also delineated and the ice reports for the month shows the banks of Newfoundland studded over with bergs and field ice. The work of publishing this valuble chart is carried on by two officers of the U. S. Navy, and marine meteorologist Everett Hayden.

CAPT. TOWERS of Hamilton, Mr. W. A. Geddes of Toronto, secretary of the Canadian Inland Marine Association, and Mr. A. Jacques, of the Merchants' Line, Montreal, accompanied by Messrs. McKay, Curran, Ryckman and Boyle, M. P.'s, had an interview with the Minister of Railways and Canals to ask that the Government provide a means for assisting vessels up the channel at Morrisburg, whereby the necessity for using the rapid du Plat canal will be avoided. It was suggested that as the water at the entrance to the canal is low, if a chain tug be provided at the head of the channel it would be a great benefit to vessels. The Minister has promised to consider the request.

IN speaking of the height of a bridge necessary to clear the spars of a vessel, it was recently stated "that the tallest masts on the lakes being 160 feet high, and allowing 6 feet for the heave of the sea, no less than a height of 166 feet would clear the trucks of the masts." There is no appreciative rise and fall of tides on the lakes, but in quoting figures like the foregoing, it should be stated whether the vessel is light or loaded as the difference would be even greater than that allowed for the heave of the sea.

ALTHOUGH it is now nearly three months since the ship calkers' strike began in Detroit the struggle is not yet ended. The 12 calkers who came from Maine are still pretty close prisoners in the yard of the Detroit Dry Dock Co. A comfortable house has been erected on a craft and there the calkers take their meals and sleep. The officers of the company say the quarters on the scow are excellent, and the men remain there rather than go to a boarding-house outside, because they believe that they could not be boarded so cheaply or so comfortably elsewhere. The strikers and their friends intimate, however, that it is because they do not feel safe outside of the company's premises that they remain on the scow.

THE Lake Carriers Association have now their shipping offices at the various ports in fair working order and men are being shipped with less friction than formerly.

The Marine Record.

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CLEVELAND, O., JUNE 9, 1892.

GENERAL POE is eminently right in ascribing to old "Jupiter Pluvius" the power of controlling the mean level of the lakes through the tributary water-shed. The Weather Bureau records show a larger rainfall around the lakes for the month of May than has occurred in the same month in the past twenty years.

THE April number of the *Reporter*, published by the Merchant Marine Service Association of Liverpool, contains a eulogistic article on the United States hydrographic service, and easily awards to the States the merit of doing the best work in this direction. The North Atlantic Pilot Chart and the "Lights of the World" also come in for a share of praise. While the nautical publishers of Great Britain are soundly berated for issuing voluminous and costly works of ancient history, the marine publications from Washington, D. C., are highly endorsed.

IN the adverse report of the Board of Engineers, U. S, A., on the construction of a bridge across the harbor of Duluth, Minn., it is stated that if such a dangerous precedent was allowed there could be no reasonable objection in the future to permitting such a structure at any other exposed harbor entrance on the lakes. The exigencies of the commerce of to-day should in no instance be allowed to fetter the progress of the future, and whatever measures, in the way of bridges, tunnels, etc., may obtain in the inner harbors, rivers, and partially developed state waterways, the entrance to an important port cannot be too strictly conserved and maintained from generation to generation. Such, at least, is the most permanent and equitable policy.

THE latest development in whaleback shipbuilding on the lakes is the large passenger steamer for the World's Fair traffic. It is further learned that a large fleet is to be constructed in England for the trans-Atlantic traffic. A dispatch from New York states that a ten million dollar syndicate has been formed among the leading capitalists of the American Steel Barge Co. to build this fleet and sail it under the British flag. The laws may be strictly complied with in this undertaking, yet, it is worse than unpatriotic, and a direct blow to the shipbuilding industry of the United States for the American promoters of the company to go across the water with American capital to construct a fleet whose sole support will be derived from U. S. traffic and commerce. This fleet, if constructed, will come to the westward at ballast rates, and earn their dividends exclusively from the favor of American shippers. Therefore, it would come with a better grace if those seeking American favors and patronage assisted in the upbuilding of the country's industries and prestige by adding their mite, instead of carrying it abroad to enrich our keenest competitors in the ocean trade.

MESSRS. SCOTT AND DODGE, the government steamboat inspectors at Grand Haven, Mich., have commenced an investigation of the collision between the steamers Pilgrim and Kalamazoo on Lake Michigan. Various witnesses will be summoned, including some of the passengers, and the crews of both steamers. This is regarded as a very important case, and the finding of the inspectors will be watched for with interest by many very closely interested people, though such a ruling as both being to blame, neither in fault, or a division of damages, ought not to be obtained, as there have already been too many such unsatisfactory verdicts rendered, and it is high time that clear and concise explanations of the sailing rules should be held forth for the guidance of the lake marine.

TESTING FOG SIGNALS.

In view of the several charges made against light-house keepers on the lakes relative to the said-to-be-unheard fog signals, would it not be more satisfactory for all concerned if the light-house board instructed inspectors to determine something about the waves of audibility under the various conditions of temperatures and winds. In times past we have thrashed out this question of the "audibility of sound" very thoroughly and showed undoubted proofs of the regular workings of a fog signal though unheard at certain distances from the point of emission. That is to say, signals have been heard at one mile but not at two, at three and not at four, also at certain elevations or depressions, and seemingly like the action of a fog bank in sometimes leaving the horizon visible from an elevated position and it other times only by gazing under it. In such a manner does the waves of sound seem to be propagated over certain areas, to the utter discomfiture of vesselmen and light-house keepers.

The latest aberration in the audibility of sound comes from Evanston, Ill., a fog signal by the way which has been criticized freely in the past and under the same circumstances, with similar results as the following:

Masters of craft are reporting at the custom house the fact that the Evanston fog signal is not sounded the present foggy weather, and that the bells on the lake crib and the exterior breakwater off Chicago are also silent. The steamer Stimson narrowly escaped being totally wrecked on the water-works crib last week and a large schooner had a similar experience at the exterior breakwater. Captain Higgie of the schooner Oak Leaf reports that he laid outside off Chicago in the fog from 10 p. m., Friday, June 3, until Saturday morning and that he heard no fog horn or fog bell in all that time. He could hear trains, yet was confident that no attention was paid to the fog bells. Vessel men generally are suggesting that a monster petition be prepared, asking the collector of the port to take the matter in hand and see that the station keepers do their duty.

To offset the foregoing we bring before the attention of vessel men a flat contradiction to the charge, under date of June 5, in so far as Evanston is concerned:

GROVE POINT LIGHT STATION, EVANSTON, Ill.—I notict that vesselmen are again complaining that the fog signal ae this station is not being operated. I have to state that there is not one word of truth in any such complaint. The ten-inch whistle has been in almost constant use at this station since May 30, last, and is in use at the present writing. We have only stopped the whistle for twenty minutes during the last sixty hours. Never since this station was established has there been such a long run of fog and all past records for sounding the fog horn and whistle have been badly beaten. The ten-inch whistles now in use were put in operation April last, and the sirens, or fog horns, removed. I am satisfied that a great number of vesselmen are not aware of this fact and still think that we have the fog horns here, and when they hear the ten inch whistle they think that it is some steamer blowing her whistle. Commander Ludlow notified mariners that the change in the signals would be made last spring. I am doing all any man can can do to prevent vessels running ashore in this vicinity, and the people of Evanston and the fog signal records will bear me out in all of my statements.

EDWIN J. MOORE,
Keeper Grove Point Light Station.

To the uninitiated it would almost seem as if either side had but a slight regard for the truth, yet, we have published a similar experience in this locality before, nor can we see any better way of proving the correctness of the contradictory reports than by instituting a trial test in the vicinity of Chicago, for, if there are characteristics of sound, the feature should be thoroughly understood before the advent of an immense fleet of extra tonnage at the World's Fair.

We are not in a position to state whether a tell-tale is fitted at the Evanston station to record the time of every blast, but if not, the appliance might easily be added, it is in use at some stations abroad and might prove of special use at Evanston, as the keeper states, persons ashore are good witnesses of the continuance of the blast, but a self recording indicator would always furnish silent though indisputable evidence.

COASTAL NAVIGATION AND SHAPING COURSES.

There is nothing more gratifying to the pilot or navigator during his active career than to make good landfalls; that is, to shape a course, have it steered, and sight the light or headland exactly at the time and place calculated.

This is, perhaps, more noticeable, and of vastly more importance on the lakes than on the coast. There are, no doubt, many instances where a lack of professional zeal renders an alteration of the courses steered between two points the rule instead of the exception.

The primal cause of nearly all strandings is due to the course not being made good, and for which the following reasons may be enumerated—having a cheap, unreliable or badly placed compass, correction for variation and deviation not being closely applied, the set of current not allowed for, and, finally, the most fruitful source of all, viz: bad steering. In reviewing the causes leading to strandings, an eminent authority stated that "more vessels met with casualties through bad logic than by bad logs," or, in other words, misplaced confidence in a vessel's position, through trusting that the course set had been made good.

When we considerthat an error of only one degree in the course would put a vessel a mile out of her reckoning in a distance of a little over fifty miles, or about four miles in two hundred, the importance of shaping and making an accurate course is manifest, and yet, no vessel can be steered with a much less error than one degree. If the compass is so placed that the wheelsman has to look obliquely over the margin of the card to the lubber line or point, an error of a quarter of a point may easily be made, and this would land a vessel seven and a half miles in one hundred and fifty, or fifteen miles out of her course in a run of three hundred miles. This, coupled with a moderate surface current, or changing the course in passing vessels, might tend to set a steamer another five or six miles out in a run of twenty-four hours, all of which goes to show that absolute positiveness regarding a vessel's position in thick weather should not be indulged in.

In coastal navigation frequent bearings of points of land form a most reliable method of keeping closely the track of a vessel, and the four point bearing is a standard rule, or a five point bearing, if we consider that for every mile a vessel runs from the time of taking the five point bearing until the object is abeam the ship is 1½ miles distant from the point when it becomes abeam, or in other words, say the vessel runs six miles from the time the object bore five points on the bow till it was abeam, then the distance the ship was from the object when abeam would be six times one and half, or nine miles. If running only four miles then four times one and a half would give her six miles off the object when abeam.

The reputation of a master or pilot depends upon the caution observed in the matters here spoken of, and in these days, when steamers valued with their cargoes from half a million dollars down, are driven at a ten to fifteen mile gait, too many precautions against accidents can not be taken in thick weather, and the lead is an ever present and constant guide in nearly all cases. Nor has the engineers of large steamers easy minds during the prevalence of fogs, as their entire attention must be devoted to the instant and positive control of the mass of mechanism under their personal charge, as even a few minutes delay in executing signals would frequently involve serious loss of life and property.

THE FREIGHT SITUATION.

The freight situation is now not much better than at the most discouraging period of last year. The Escanaba ore rate is 65c, one or two boats having accepted as low as 60c a few days since. Ashland tonnage is being steadily placed at $1, and what little Marquette chartering is being done is at 90c. Coal freights to Lake Michigan have a stiffer tendency, with a rate of 50c to Chicago and Green Bay, 45c to Manitowoc, and 40c to Escanaba. The Lake Superior rate is 45c for United States ports, and 50c to Fort William. Wheat at Duluth is not very attractive at 2½c, and most of the shipping is on the line boats. The same is true to some extent at Chicago, although wheat was raised ⅛c two days since, the rate to Buffalo now being 1⅝c. Lumber to Chicago has been knocked off 25c per M., but rates to lower lake ports hold their own.

OBITUARY NOTICE.

CAPT. THOMAS G. CROSBY.

Capt. Thomas G. Crosby, a leading spirit in lake marine underwriting for a score of years, died at Chicago last Monday morning of cancer of the throat very similar to Gen. Grant's last trouble. He was senior member of the firm of Crosby, McDonald & Co. and Crosby & Gordon. Capt. Crosby enjoyed an enviable reputation as a commercial man of exceptionable integrity, and he had hosts of friends around the lakes. He was about 65 years old.

NEW TONNAGE.

The following lake vessels with their home port and net tonnage have been assigned official members by the Bureau of Navigation, Washington, D. C., during the two weeks ending June 4th., 1892: Steam vessels—Columbia, Grand Haven, 91 tons; Deer, Grand Haven, 25 tons; Mocking Bird, Port Huron, 36 tons; Riverside, Buffalo, 90 tons; Vonito, Port Huron, 49 tons; Pillsbury, Marquette, 1572 tons, Washburn, Marquette, 1572 tons. The only sailing vessel given an official number was the schooner John C. Fitzpatrick, Cleveland, 1207 tons.

Capt. Andrew Thompson, of the propeller Africa, feels very much aggrieved at the reported loss of the steambarge Kincardine near Tobermoray. He is part owner of the Kincardine and is positive that had anything serious happened to the vessel he should have heard. He states that his "bad luck" is neither proverbial nor does it follow him. "On the contrary," he says, "I have every reason for thankfulness as regards my experience both as master and owner of vessels. I sincerely hope all my friends shall never have worse luck than has been mine, and I warrant their complaints will not be loud." Capt. Andy is noted for his good seamanship. He vouchsafed to your correspondent that the reported disaster to the Kincardine was possible but not probable as there are calamity howlers up in the Georgian Bay locality.

(*Continued from page five.*)

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

The Mann floating elevator "Cyclone" is causing a deal of trouble. Its position in the harbor made it an obstruction to navigation, so Harbor Master Doyle finally had it turned around into the Ohio basin. This does not suit Mr. Mann, as he had erected some transferring machinery on the dock at the old stand, and it does not suit the canal boatmen, who have to pay by tow bills to get up into the basin. It is not improbable that the elevator will be towed back to its old place.

The steamer Hecla on her last down trip did a pretty good piece of towing. She was grain laden, and just below Thunder Bay encountered the steam barge E. S. Tice, disabled, with her consorts, Kingfisher, Knapp and Little Wissahickon. The Hecla towed all four boats to Detroit, and was not a day late here.

Capt. McMurray has left the steamer Shrewsbury and gone back to the Mascotte, which he sailed last year. Capt. Franklin F. Kelsey, of Boston, takes Capt. McMurray's place on the Shrewsbury.

The steamer Brazil was 275 bushels short on her Chicago corn cargo.

The Tonawanda lumbermen's strike may prove rather serious. A large number of men are now out, over 500. Their demand is for 40 cents an hour. One lumber dealer says he thinks the Tonawanda men are trying to bring on a general strike all over the lakes. Tuesday the barge C. L. Young, of the George King tow, experienced some trouble here. About 350,000 feet of her cargo was consigned to Stewart Bros., Buffalo, and the rest to Tonawanda parties. This fact was discovered by the stevedores when 50,000 feet had been unloaded. Though they were getting full union wages they immediately quit work. Later in the day by order of the local leader of the union they took off some more lumber, but left again, and the work was finished by some of Stewart's yard men.

Nearly all sailing vessels carrying non-union sailors continue to take a police officer or two on board on entering port and no trouble is feared from the union as long as this practice is kept up.

The strike of contractor Conner's 'longshoremen seems to have petered out. It is reported that two of the strikers absconded with what money was raised to carry on the strike. Last Saturday the police were on the docks in force, it having been stated that the strikers were going to clear the docks of all men who were at work.

Coal freights advanced over a week ago, but the fact was most carefully suppressed here and although nearly all the brokers in the city were aware of the raise they displayed a most enthusiastic silence toward the press, so that the first intimation that the expected advance had taken place was wired from Cleveland. The advance to 60 cents was paid only to Chicago. Late charters to Racine at 65 cents put that rate up 5 cents also. Shippers have taken all the tonnage in sight to Chicago, and considerable coal is also going to Green Bay at 60 cents. The highest coal freight of the season was that obtained by the schooner William Home of 80 cents on a small cargo to Traverse City. But little grain has been coming in, and rates continue firm, as above quoted, and at 50 cents for Milwaukee and 25 cents for Toledo and Detroit. Coal shipments for May were 273,463 tons, against 327,670 tons for May, 1891. Total shipments for the season to June 1 are 385,902 tons, as against 416,207 tons for the same period last year.

The barge Celtic, in tow of the City of London, took an up-cargo of two big boilers and a smokestack for one of the new Davidson steamers.

Though lately grain receipts have been light, the season opened so early that the total is very large, making 17,645,790 bushels, and 1,319,500 bbls. flour, or including flour as wheat 24,243,290 bushels.

THE DETROIT BUDGET OF NEWS.

Special Correspondence to The Marine Record.

Capt. George E. Mapes, one of the oldest and most widely known captains of "sail craft" of the large number who have made Detroit their home, died at his residence 330 Meldrum ave., June 4th. He has for many years owned and sailed his own vessel. At the present time he owned the schooner Smith and Post, which he bought of Alpena parties some years since. Captain Mapes was a very hard worker, and for several seasons past seemed to go into winter quarters in very poor health. He was aged fifty-one, active and respected by all with whom he came in contact.

Thomas G. Crosby, who died in Chicago on the morning of June 6th, was the senior member of the firm of Crosby, McDonald & Co., insurance men of Chicago, widely and favorably known all over the lakes. Mr. Crosby was 65 years of age, and had a wide acquaintance at this port.

The body of John Hurley, lost in the Mackinac-Wash-burn collision, on the night of May 28th, has not yet been recovered, and a rumor gained ground and publication in a Detroit paper on the 7th that it had been picked up, but was held at some unknown point by river pirates to obtain a ransom of one thousand dollars. Nothing definite can be learned of the matter.

The wrecker Saginaw is shortly to be raised from her position on the Canada bank, opposite Detroit, where her upper works were burned off a short time since, and Capt. Isaac Watts expects to rebuild her. She proved under the management of Parker & Millen quite a money maker the past two or three years.

The tug Winslow, of Ben Boutelle's Bay City fleet, is still on and probably sunk off Point Pelee, and was reported Tuesday as having a big hole in her, and that her rudder and shoe are also gone.

Weather here has at last cleared up, with indications of it remaining so, and the erstwhile cloudy faces of our several excursion line managers begin to brighten up some. Detroit is the banner excursion city on the entire chain of lakes.

Dr. H. J. Penrod, of the U. S. Weather Bureau Service, passed through the city Wednesday en route from Cleveland to Chicago. The doctor will take in a number of lake ports. His present mission is seeing to the careful distribution to masters of vessels of a supply of current bottles to be thrown over at various locations in hopes that much may be learned of the regular currents of our inland seas. The doctor is an old G. A. R. veteran, and has only the arm nearest his heart left to shake hands with, a veteran we trust who will meet with the cordial aid in the work that it is deserving of.

Joseph R. Oldham, of Cleveland, who has charge of the construction for account of the owner of the large straight-back steamer building at Wyandotte, was at the Cadillac on the 7th.

A fixed white light has been placed on the wreck of the steamer Progress in the Detroit river, and vessels must keep to the eastward of it. Diver John Quinn, who has made a very thorough examination of the wreck, reports the hole in her starboard side, which is about opposite her pilot house, as being a bad one. She is cut clear to the turn of the bilge.

I met H. C. Beeson (who has been absent from the city the past ten days in Cleveland) coming out of the post-office with a bundle of mail. When asked as to how his marine directory was selling this year, he said that the great trouble now is to find people who have not already bought it, as you will see by these here, he passed me a couple of cards, one from the well known firm of Lewis & Gilbert, vessel agents at Duluth, reading: "We got a copy of your book at the Custom House, and are sorry we did not put an advertisement in it." The other card was from Lord & Norton, also of Duluth, saying: "We have your work on our desk. We shall want to carry an advertisement with you for 1893." Then he turned up a postal card from Charleston, W. Va., ordering a book. It is needless to say its a great book in its peculiar field. Mr. Beeson thinks so much of Cleveland that it won't be surprising if we find him located there in the near future.

Hon. S. B. Grummond is attending the Minneapolis convention this week, and is an out and out "Blaine boomer." The Captain has had business and social relations with the ex-Secretary of State, and has unbounded faith in the "magnetic man from Maine."

It is anticipated that the tug Washburn, of the Hurley fleet, can be readily pumped out and righted. In an attempt to do so on Monday, the engineer of the tug Dave & Mose was badly scalded by the bursting of the ste ose attached to the pumping apparatus.

TORONTO, ONT.

Special Correspondence to The Marine Record.

The steamer Chicora, of the Niagara Navigation Co. commenced running on the Niagara & Lewiston route on Monday, making two trips per day. Capt. Harvey Solmes is again in command. In spite of the placing of several new steamers in the various excursion routes out of Toronto, the Chicora is still a prime favorite with the public and this year she is looking in first-class shape for the season's business.

Messrs. Smith & Keighley, owners of the Campana, gave a complimentary excursion to the members of the Board of Trade and their friends last Saturday. A large number availed themselves of the opportunity of a sail and a very pleasant two hours' cruise was had. The Campana left for Chicago on Monday night.

The propeller Shickluna and consort St. Louis, arrived with coal from Charlotte, for the Ontario Coal Co., and after discharging left again for the same port for another cargo. The steambarge Africa, with schooners Severn, and H. M. Stanley, cleared light for Amherstburg to load stone for the Canadian lock at the Soo. The schooners Laura and Grantham loaded timber for Garden Island. The tug Bennett arrived from Port Dalhousie to tow Manning & McDonald's dredges to Frenchman's Bay where they will be used to deepen the harbor.

Rochester people are very much interested in the ship railway project between this city and the Georgian Bay. A very interesting correspondence is being conducted between Secretary Wills, of the Toronto Board of Trade and the President of the Rochester Board on the subject. and the probabilities are both chambers of commerce will hold a conference on the subject at an early date. Mr. Wills has informed the Rochester Board that a charter has been obtained for the ship railway and Mr. Blain, the president of the Ontario Ship railway, has written to Rochester on the subject. Mr. Blaine, in his letter says that the ship railway would tap a point on Lake Huron, where passes the greater volume of water moving within similar compass anywhere on earth. The Ship railway would give Rochester and Oswego a direct control of the coal markets of the Northern States, whilst it would bring the grain trade of Chicago and Duluth through to Lake Ontario. Mr. Moss, secretary of the Rochester Board of Trade says: "We are much in earnest here about the matter, for the extraordinary shortening of the distance between the ports on Lake Ontario and upper lakes affected by a ship canal or ship railway from your city to the Georgian Bay, would instantly transform the carrying trade of half a continent, double the population of Toronto in a decade of time and transfer to Rochester the lion's share of the transportation and transhipping of freight from the Eastern States, now wholly controlled by Buffalo. We will send a deputation to Toronto whenever you adjudge the proper time has arrived, meanwhile keep me posted as to the course of events." Mr. Blain intends to visit Rochester soon to consult with some of the financial men in that city and Oswego. SPARTA.

ASHTABULA HARBOR, O.

Special Correspondence to The Marine Record.

Two marine engines were shipped to the Globe Dry Dock Co. at Cleveland, Thursday, by the McKinnon Iron Works. The engines are for the new twin screw fueling scow of Pickands, Mather & Co.

J. P. Bambus, foreman of lighthouse repairs and construction in this district, was here last week to arrange for the rebuilding of the range light which was wrecked by a Chippena last month. The foundation will be moved back several feet from its former position, to prevent a similar accident.

The custom house records show that 229 boats entered this port during the month of May.

Capt. Charles Woods, master of the schooner Redwing, was hurt on the Lake shore side of the river last week by a swinging ore bucket which knocked him from his boat to the dock. Two ribs were broken and his head and face badly cut.

Bad weather has greatly delayed harbor improvements. About one week's dredging in a month is all that can be done until the weather is steady again, when a week's work will complete the present contract. Nothing will be done after that until the new appropriation becomes available.

A LARGE STEEL PLANT FOR ESCANABA.

Special Correspondence to The Marine Record.

ESCANABA, MICH.—"We've Got It" says the *Mirror*. There is no longer any doubt that the mammouth steel and iron plant will come to Escanaba, because the contract is signed and delivered. It was received by ex-mayor Campbell Saturday morning and executed without parley or delay. We have waited patiently for the realization of our unrivalled natural advantages and now our "star of hope" has finally made its appearance way aloft from the horizon, and the future growth and prosperity of our fair city is assured. The plant will be one of the largest in the United States and the contract provides that the company will employ from 800 to 1500 men, and the daily capacity of the concern 300 to 500 tons of the manufactured product. Mr. Holten, the engineer, visited us and the immediate result therefrom was the execution of the contract at once. The Delta Steel and Iron M'f'g Co. is the style of it and Mr. August Pollak is the secretary pro. tem. and they have made application for articles of incorporation at Springfield, Ill. The site selected is at the south line of this city but there is still "site" enough left for that dry dock and shipyard.

Mr. A. R. Moore, the insurance man, has consolidated his business with that of F. J. Merriam & Co. and will hereafter hustle that concern. They deal in all kinds of insurance and guarantee the best there is going.

The York Iron Co. has secured a site on its own terms near the place where the old furnace was located and we believe there will soon be erected on the spot a first class iron furnace.

Iron ore is going forward at an unprecedented rate of speed and during the last ten days of May Escanaba beat the world's record for output in this line. This port will have a splendid total next fall.

Shipping master Nesbitt is putting on crews of men whenever there is a call for such, and all is quiet with him, though he wears a star of the special order. UNO.

Capt. Hugh Rooney, of the Canadian schooner Jessie Drum, mondwell nighlosthis life at theFairhaven chute. He stepped up on to the runaway to see if the Drummond's load of coal was nearly in, and while in the act of crossing the track a dump car suddenly started, carrying the captain over the mouths of three full pockets of coal and dropping him into the fourth, which was partially empty. His injuries were so serious that he had to be left at Fairhaven, the mate taking charge of the schooner. The car passed over the captain's left foot and cut off his large toe, beside which he had four ribs broken, his shoulder blade out of joint, and his face terribly cut and bruised. In his agonizing struggles with the car the unfortunate mariner bit about an inch off his tongue, which the surgeon replaced with stitches. A telegram was sent to Cobourg, where Capt. Rooney's relatives live, and his brother left for Fairhaven to look after the injured man.

THAT DULUTH BRIDGE.

The report of the Board of Engineers, U. S. A., consisting of Colonel O. M. Poe, Major William Ludlow and Major W. A. Jones, on the construction of a bridge across th entrance to Duluth harbor, is as follows: The board do not admit the extent of the dangers recited by the opponents of the bridge project, and fully recognize the great advantage to the city of Duluth, which would accrue from a suitable means of communication with Minnesota Point. The latter clearly appears to be a necessity to the future growth of the city, as well as to the commerce which promises so soon to pour through her gates; and every foot of dock frontage behind that strip of land ought to be available There ought to be considerable concession upon the part of each of the conflicting interests involved, and each should yield a fair measure.

The design of the lift bridge proposed, is one of great merit, and the details seem to be well studied and arranged. Any objections to the plan which have appeared to the Board are of a minor character, and do not extend to the main proposition, because they can be readily obviated. A complete description of the bridge is to be found in the papers and drawings submitted by Mr. J. A. Waddell, the engineer who designed it.

It is to be understood that these favorable remarks apply to the design, and not to the question whether a lift bridge is to be preferred at this locality. As a matter of fact, the Board think that a properly designed swing bridge would better fulfill the requirements, except as to the area of ground that would have to be occupied by the shore arm of the structure.

The City of Duluth states that she can afford to build the bridge proposed, but cannot afford to construct a tunnel (which is admitted to be a complete solution of the problem), and that if she cannot have a bridge she must be deprived of the use of Minnesota Point, the only direction in which the city can expand for commercial purposes. This is a strong argument and appeals to the sympathy of the Board, especially in view of the well known activity and enterprise of the people of Duluth, which certainly deserve all the encouragement that can properly be extended. But the Board feel compelled to put this aside and to deal with the question regardless of sentiment. They must look to the future, and base their opinion upon what seems to them best for the interests of all concerned.

In view of the facts and arguments detailed the Board concludes that it is not advisable to authorize the construction of any bridge across the canal entrance to the harbor of Duluth, Minn. They believe that the dangers and difficulties to shipping which would result from the bridge proposed have been overestimated by its opponents, while the degree of obstruction which would be due to such a structure has been underrated by its advocates. Any bridge over a waterway is a menace to navigation, but the propositions of the city of Duluth, if carried into effect, would reduce them to a minimum in this case.

The city of Duluth proposes certain guarantees looking to the proper operation of the bridge, and even to its removal in case it should prove to be an unreasonable obstruction. The probable value of such a guaranty is indicated in the closing paragraph from the report of the Chief of Engineers heretofore quoted.

If there were a breakwater outside of and covering the entrance to the canal, such that vessels would approach and pass the canal free from danger due to stress of weather or perils of the sea, the conditions would differ so much from those actually existing that the Board might find it less difficult to reach a conclusion that would be satisfactory to Duluth.

One very important factor in leading the Board to their conclusion is the disinclination to establish a dangerous precedent. The piers which border the canal at Duluth are essentially the same in general function as those which are found at the entrance to the principal lake harbors, and the canal itself corresponds exactly with the throat of all harbors where the entrance is between piers. It is the point where the mariner passes from the perils of the sea into the shelter and safety of the harbor. He approaches this point, and sometimes passes it, in the midst of a struggle for life and property. Such a point cannot be too free from obstruction, or the possibility of it. If a bridge were authorized over the canal at Duluth there could be no reasonable objection to permitting such a structure at any other exposed harbor entrance on the lakes; and, without doubt, applications for authority to bridge other harbor entrances would rapidly follow upon the granting of such privilege at Duluth, thus leading to a condition which would be unendurable.

BRISK HANDLING OF CARGO.

Mention was made recently of the loading on the Northern Wave at West Superior, Wis., of 2,240 tons of flour in 8 hours and 42 minutes. Mr. Meadowcroft, of the Northern line, has received the following from the Duluth agent: "We loaded on the North Star, May 31, at the Eastern Minnesota Railway dock, 2,252 tons of flour and copper matte in 7 hours and 15 minutes, beating all previous records. Commodore Connors will please haul down his broom." It is noticeable that the above is not bulk cargo such as coal, iron ore, salt, etc., but properly comes under the head of general cargo and speaks volumes for the stevedore gangs as well as the loading facilities at West Superior.

THE CANADIAN CANAL TOLLS QUESTION.

The conference between the Dominion minssters, Foster and Rowell, and the State Department at Washington has been hurriedly brought to a close by the resignation of Secretary Blaine.

It would appear that the Dominion officials were, and probably are Americans to arrive at a mutual agreement regarding the Welland canal tolls, but on the abrupt retirement of Secretary Blaine, they left Washington in somewhat high dudgeon.

Ex-Senator Conger, of Mtchigan, who is the attorney of the lake men at Washington, was asked what he thought of the situation. He said: "I cannot understand how the Canadian officials have gone away in such haste. The government is still here. Mr. Blaine is no longer at the head of the State Department, but there is a capable man to put in his place. His successor is appointed. The negotiations might have gone on the same. The President has given his attention to the matter and he would have seen to it that every consideration was shown to the visiting delegation and that the interests of the United States and her people were properly cared for. I regret that our Canadian friends went home so suddenly, for the question at issue is one of importance to our lake ieterests. As I am informed, no satisfactory agreemont has as yet been reached. The Canadian government seems unwilling to come to our terms. At the same time I believe that if the conference had been continued all differences would have been amicably adjusted. It is proposed on our part that unless the same rebate is allowed to American vessels for reshipment that is granted to Canadian vessels, tolls shall be imposed on Canadian vessels passing through the Sault canal, There is little doubt that an enforcement of this arrangement would very soon bring our neighbors to terms in rsspect to the Welland Canal. It is a game that two can play at. I believe negotiations will be resumed at no distani day and that a satisfactory compromise will be reached. The government of Canada cannot afford to continue its proscriptive policy.

COMBINED SURFACE CONDENSER AND FEED WATER HEATER.

Marine and stationary engineers using Surface Condensers are well aware of the difficulty presented at times, of retaining the feed water in hot-well near and at the proper temperature due to the vacuum in condenser, particularly in cold weather, owing to exposure, irregularity of circulating pumps, radiation of heat from pipes and other causes, and as it is desirable to return the feed water to the boilers at as high a temperature as possible, thus not only economizing fuel, but adding to the life of the boiler, the use of a simple and effective method of heating the feed water is of great importance.

The patent combined surface condenser and feed water heater, manufactured by the Standard Condenser Co., 15 State St., N. Y., builders of the Lighthall Surface Condenser, guarantee that their patents, fully overcomes these objections, is simple in design, involving but little extra cost and space; a high vacuum can be maintained, irrespective of temperature of hotwell, and has given the most satisfactory results on board of steam vessels, electric light stations, and other steam plants.

The heater tubes are exposed to the hottest steam, and the feed water divided into many small streams, is heated to within a few degrees of the temperature of the exhaust steam. There is no "choking" of the exhaust through small and contracted passages as with ordinary heaters, no back pressure on the feed pumps, the tube area being from six to eight times the area of cross section of feed pipes, a large amount of heating surface can be obtained, the apparatus can be built either cylindrical or rectangular, and the weight and space saved on shipboard over the ordinary heater usually crowded into exhaust pipe, is of considerable value in most cases.

A NEW GOSPEL SHIP FOR THE LAKES.

A new gospel ship was launched at O. Marcott's shipyard at Chicago last week. The Rev. Mr. Ashley, who will carry the gospel about the lakes on the new craft, was formerly a Methodist minister, but now announces himself as independent in religious thought, and says he will preach the gospel of Jesus Christ without regard to denominational lines, so that all may listen to him. He had often heard the Rev. Captain Bundy, of the gospel ship Glad Tidings, preach, and the Rev. Mr. Bundy's work may have suggested the idea to him. The launch was a perfect success. A few remarks were made by Mr. Ashley, dedicating the ship to the true gospel and christening her the Liberty, meaning liberty of religious thought, and then a fervent prayer was addressed to the throne of grace for the success of the great mission. A large number of people were interested in the services. The Liberty is 58 feet in length, has 12½ feet breadth of beam, and 6 feet depth of hold. She has good power, and carries two spars, being built and fitted out, and commanded, for speed in catching sinners. She will be towed to Sheboygan, Wis., to receive her finishing work, and will commence her first cruise the latter part of the present month. Owing to the backwardness of the season the gospel ship Glad Tidings, the Rev. Captain Bundy, commanding, which wintered in Chicago, has not yet started out on her annual cruise, but will do so as soon as the weather settles.

THE schooner David Stewart, abandoned as a total loss when stranded last fall, was recently taken off the beach at Geneva, O., and towed to Cleveland for repairs. She has again been accepted from the underwriters by her former owner, J. W. Squires, of Marine City, Mich., and is fully as staunch a vessel as she was before stranding.

DULUTH ITEMS.

THE NEW GRAIN CROP.

Contractor Anderson, who built the present plant of the American Steel Barge Co., has just returned from the Pacific coast, where he has been putting in the barge company's plant at Everett. He says that boats are already being built there, though the works are not yet finished. He returns in a short time. At the yards across the bay the steamers Pillsbury and Washburn have been launched successfully. They are the first package freight vessels built by the American Steel Barge Co., and differ from the former vessels of the fleet only in the fact that the "tumble home" is modelled in a new fashion, and that gangways and package freight handling facilities are put in. Each is 320 feet long; 42 feet beam; 25 feet depth; 2,235 gross, and 1,572 net tonnage. They will be used for the Gladstone-Buffalo flour and coal trade, in a vain effort to avert the disaster to Minneapolis flouring industry by the leadership of Duluth mills. Each vessel is understood to have cost the new owners about $175,000.

Wheat shipments from here have been light of late, and receipts have also been small. It looks as if a little of the grain now in store would stay over until the new crop begins to move. Interest in the probable or possible size of the new crop is increasing daily, especially as it begins to be assured that this crop will be exceedingly small compared with last year. Chief State inspector Clawson, of Minnesota, said last week that the wet weather of late spring had made a difference of 50,000,000 bushels, and this estimate was probably small. Letters from all over the northwest indicate that the grain is not yet more than half sown, and it is now too late to plant with any prospect of a harvest. Where sowing has been carried out the soil is a mere mud. There will be no such grain crop to move out of Duluth next fall and spring as the last.

H. G. Inman has already fitted several of his tugs with fire pumps to serve as fire tugs along the harbor front, he receiving for the service a stated sum from the city. This service will be far cheaper than to buy and equip and maintain a special fire tug, and will be nearly as effective. He will guard both Duluth and Superior water fronts. The Steel Barge Co. is building a tug which is to be used in service about the yard at the dry dock, and to do occasional whaleback towing.

TREASURY DECISIONS RELATING TO VESSELS

Circular—Seamen's Wages.

TREASURY DEPARTMENT,
BUREAU OF NAVIGATION,
Washington, D. C., April 28, 1892

To U.S. Shipping Commissioners and others:

The following rules will be observed by U. S. shipping commissioners in computing amounts due American seamen as wages. Similar rules are observed by the consular officers of the United States, viz:

1. (A) The date written in the column of the Shipping articles headed "Time at which he is to be on board" is taken as a time when a seaman's wages should commence, provided he was on board or duly presented himself to go on board at that time.

(B) If he went on board before that date with the consent and subject to the orders of the master, he is deemed to have commenced work, and is to be entitled to wages from the date of going on board.

(C) If he had failed through his own fault to join the ship at the time specified in the articles, his wages accrue only from the time at which he went on board and reported for duty.

(D) Disputes in regard to the time when the wages began to accrue rarely involve more than one or two days, and they are usually adjusted by the mate's log, although if there is doubt arising from the absence of proper entry on the log or suspicious interlining or other cause, the seaman's statement may be accepted.

II The column in the shipping Articles headed "Place and time of entry" contains the date of the agreement. It does not indicate the time when wages are to begin.

III. The agreement is considered as referring to calendar months. For example, from February 2nd., to March 1st. both inclusive, is a month.

IV. In computing the amount due for a fraction of a month thirty days is counted as a month without regard to its length. For example, five days are one-sixth of a month, whether in February, March or April.

V (A) Any fraction of a day is counted as a whole day. For example, from March 1 to the forenoon of March 4, both inclusive, is reckoned as four days: but—

(B) If a seaman be engaged in the afternoon of one day and discharged in the forenoon of another day, the two fractions of a day are considered as one day only. For example, the time from the afternoon of March 1 to the forenoon of March 4, both inclusive, is three days.

TRAFFIC THROUGH ST. MARY'S FALLS CANAL.

The traffic through the St. Mary's Falls canal for May this year was larger than for the same month in any previous year, and fully bears out the well heralded representations regarding the steady annual increase and future importance of this gateway to Lake Superior and the commerce of the Northwest. Following is the report:

Number of passages	1,798
Registered tonnage	1,547,703
Freight "	1,535,068
Number passengers	1,482
" lockages	836

Maritime Law.

LIGHTS—FALSE ASSUMPTION OF COURSE—COLLISION—CHANGE OF WHEEL—DUTY TO WAIT FOR ANSWER TO SIGNAL.

Held, that the collision was solely due to the Delaware changing her course and running into the tug's water on her own signal without waiting for an answer, and on a false assumption as to the tug's course that she made at her own risk.

Even under the common rules of navigation, the Delaware, having the tug on her port hand, and seeing the tug's green light, but very near the shore, was required to "keep her course." Had she done so, there would have been no collision. The collision was caused solely by her changing her course to port and running into the tug's water under a signal of two whistles without waiting for any answer or permission to do so, and upon the false assumption that she made at her own risk.

The tug is without fault, because as soon as apprised of the Delaware's move to port under her starboard wheel, she reversed, and she could not otherwise have avoided collision. BROWN, J.

January 22, 1892.

United States Engineer Office, 34 West Congress street, Detroit, Mich., June 2, 1892. Sealed proposals in triplicate, for furnishing all plant, materials and labor, and excavating in St. Mary's Falls Canal, Michigan will be received at this office until two o'clock p. m., July 2, 1892, and then publicly opened. Preference will be given to plant and materials of domestic production or manufacture, conditions of quality and price (import duties included) being equal. Attention is invited to Acts of Congress, approved February 26, 1885 and February 23, 1887, Vol. 23, page 332, and Vol. 24, page 414, Statutes at Large. The Government reserves the right to reject any or all proposals, or to waive any informalities in the bids received; also, to award the contract upon other considerations than the price. For further information apply at this office, or at the U. S. Engineer Office, Sault Ste. Marie, Mich. O. M. Poe, Colonel, Corps of Engineers, Bvt. Brig. Gen, U. S. A. 6-2-23.

United States Engineer Office, Room 90, 134 Van Buren street, Chicago, Ill., May 25, 1892. Sealed proposals in triplicate for constructing three miles or less of the Trunk of the Illinois and Mississippi Canal near the mouth of Rock River; For screening, sorting, and delivering sand and pebbles, and for excavating the lock pits and constructing the foundations for three locks, will be received at this office until 12 noon, central time, Saturday, June 25th, 1892, and then opened. Bidders are invited to be present. Blank forms of proposals and specifications will be furnished on application. General plans of the works can be seen, and other information can be had at the Office of Assistant Engineer, L. L. Wheeler, at Milan, Ill. The attention of bidders is invited to Acts of Congress approved February 26, 1885, and February 23, 1887, Vol. 23, page 332, and Vol. 24, page 414, Statutes at Large. Preference will be given to materials of domestic production conditions of quality and price (including duties) being equal. The United States reserves the reject any or all bids. W. L. Marshall Captain, Corps of Engineers. 6-2-23

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GEORGE L. McCURDY, Manager,
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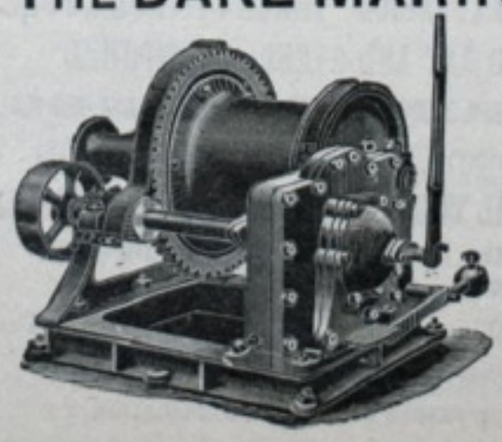

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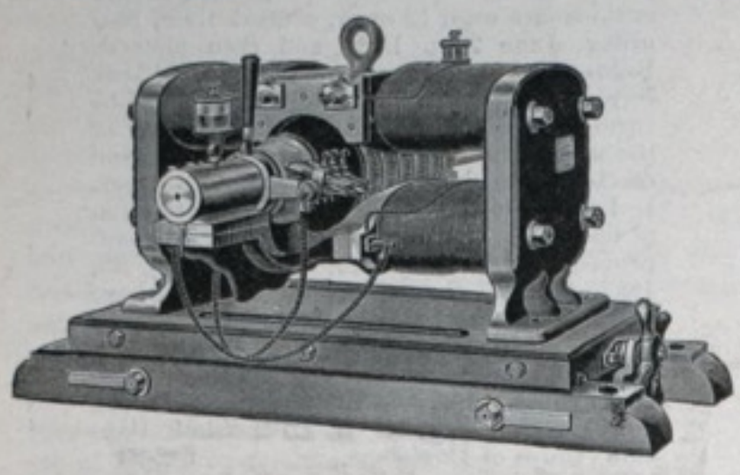

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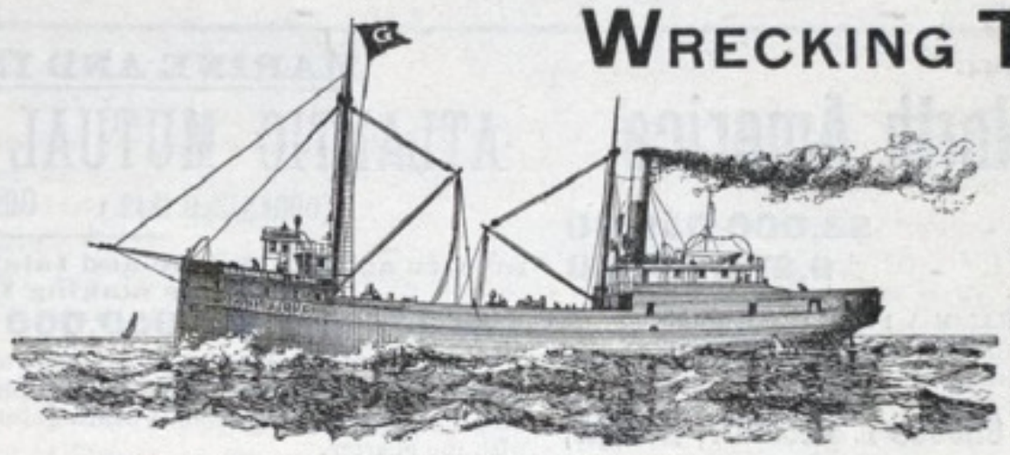

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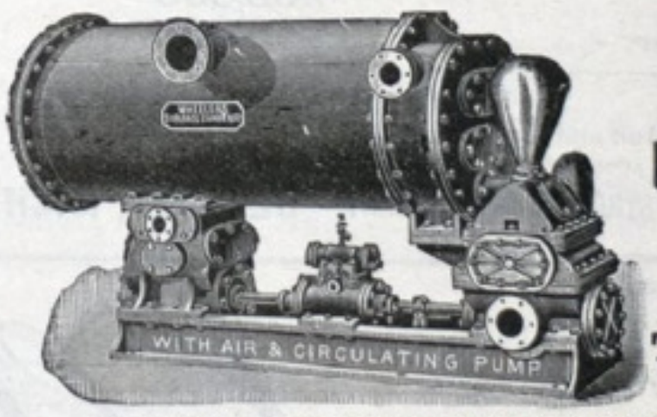

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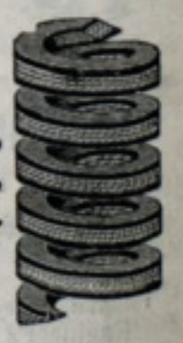

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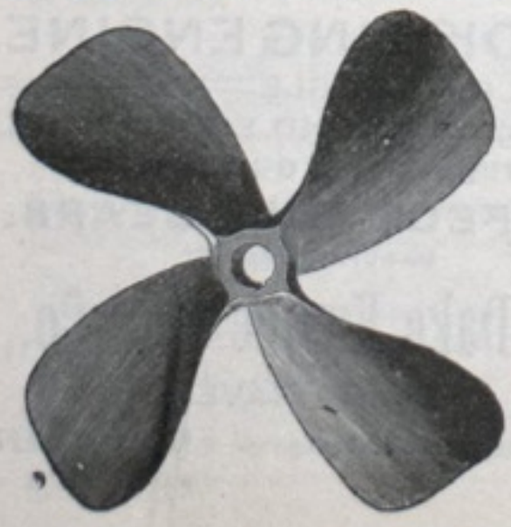

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